

REMARKS/ARGUMENTS

Favorable reconsideration of this application, as now presently amended, is respectfully requested.

Claim 30 has been amended. Claims 30-33 are active in the application.

Briefly, Applicants' invention is directed to an optoelectronic transceiver module that is inexpensive to manufacture, has a small yet robust package, and can be installed and replaced via an electrical connector for interchangeability and easy removal.

In order to solve the above-identified problems, Applicants have invented a device which includes a transceiver housing having a grounding portion and where the electrical connector of the transceiver housing has staggered contacts. Furthermore, the electrical connector of the receptacle housing is complementary to the electrical connector of the transceiver housing. The receptacle housing also has a ground tab which mates with the grounding portion of the transceiver housing. Additionally, the transceiver housing has a latch or release member which mates with a complementary feature of the receptacle housing when the transceiver is inserted into the receptacle housing. Such features are recited in Claim 30. Thus, Applicants' invention allows for the quick interchangeability of transceivers.

Claims 30-33 were rejected under 35 U.S.C. §103(a) as being unpatentable over Harding in view of Sakamoto, Block, et al, Kaufman, Wakabayashi, et al, IBM, Lebby, et al, Yingst, et al, Parmer, et al, and Matsushita.

Harding was cited for disclosing "a system with receptacles 7 and a housing with circuit board 21, optical contacts 4 and latch 15, 16, the housing and receptacle being for mating with each other." The Harding reference does not disclose staggered contacts, two optical receptacles, and a ground tab. Thus, the Harding reference lacks the claimed features of "a housing

substantially having a shape of an oblong box, the housing having a grounding portion,” and “an electrical connector electrically associated with the circuit board, the electrical connector having a plurality of electrical contacts, a first electrical contact of the plurality of electrical contacts being a ground contact, and a second electrical contact of the plurality of electrical contacts being a non-ground electrical contact, and wherein the ground contact is offset from the non-ground electrical contact,” and “a first optical receptacle mechanically associated with the housing, the first optical receptacle adapted so as to receive a first fiber optic connector plug, the first optical receptacle being aligned with the transmitting optical subassembly,” and “a second optical receptacle mechanically associated with the housing, the second optical receptacle adapted so as to receive a second fiber optic connector plug, the second optical receptacle being aligned with the receiving optical subassembly, and wherein the second optical receptacle is positioned adjacent and parallel to the first optical receptacle,” and “a receptacle housing having a receptacle housing electrical connector, and a ground tab, the receptacle housing mounted to a mother board of a host device,” and “wherein, upon insertion of the housing into the receptacle housing, the grounding portion of the housing makes an electrical connection with the ground tab of the receptacle housing,” as recited in Claim 30. Therefore, the Harding reference is not believed to in any way anticipate or render obvious the present invention as recited in Claim 30.

The IBM and Kaufman references were cited for the limited teaching of disclosing “grounding portion in view of IBM at 5, 6 and Kaufman at 86 to help eliminate static as connectors are joined.” Neither IBM or Kaufman concern themselves with optoelectronic devices, staggered contacts, or optical receptacles. Thus, the IBM and Kaufman references lack the claimed features of “a transmitting optical subassembly electrically associated with the

circuit board,” and “a receiving optical subassembly electrically associated with the circuit board,” and “an electrical connector electrically associated with the circuit board, the electrical connector having a plurality of electrical contacts, a first electrical contact of the plurality of electrical contacts being a ground contact, and a second electrical contact of the plurality of electrical contacts being a non-ground electrical contact, and wherein the ground contact is offset from the non-ground electrical contact,” and “a first optical receptacle mechanically associated with the housing, the first optical receptacle adapted so as to receive a first fiber optic connector plug, the first optical receptacle being aligned with the transmitting optical subassembly,” and “a second optical receptacle mechanically associated with the housing, the second optical receptacle adapted so as to receive a second fiber optic connector plug, the second optical receptacle being aligned with the receiving optical subassembly, and wherein the second optical receptacle is positioned adjacent and parallel to the first optical receptacle,” and “a receptacle housing having a receptacle housing electrical connector, and a ground tab, the receptacle housing mounted to a mother board of a host device,” and “wherein, upon insertion of the housing into the receptacle housing, the grounding portion of the housing makes an electrical connection with the ground tab of the receptacle housing,” as recited in Claim 30. Therefore, the IBM and Kaufman references are not believed to in any way anticipate or render obvious the present invention as recited in Claim 30.

The Block, et al and Yingst, et al references were cited for the limited teachings of disclosing “dual optical transmitting and receiving means,” and a “latch of Yingst type at 16, 17,” which is attached to the optical connector. Block, et al and Yingst, et al do not disclose staggered contacts, a pluggable transceiver, a latch or release member attached to the transceiver,

a receptacle housing, and a ground tab. Thus, the Block, et al and Yingst, et al references lack the claimed features of “an electrical connector electrically associated with the circuit board, the electrical connector having a plurality of electrical contacts, a first electrical contact of the plurality of electrical contacts being a ground contact, and a second electrical contact of the plurality of electrical contacts being a non-ground electrical contact, and wherein the ground contact is offset from the non-ground electrical contact,” and “at least one of a release member and a latch member mounted to the housing,” and “a receptacle housing having a receptacle housing electrical connector, and a ground tab, the receptacle housing mounted to a mother board of a host device,” and “wherein, upon insertion of the housing into the receptacle housing, the grounding portion of the housing makes an electrical connection with the ground tab of the receptacle housing,” and “upon further insertion of the housing into the receptacle housing, the ground contact of the electrical connector makes an electrical connection with a complimentary ground contact of the receptacle housing electrical connector,” and “upon still further insertion of the housing into the receptacle housing, the non-ground contact of the electrical connector makes an electrical connection with a complimentary non-ground contact of the receptacle housing electrical connector,” as recited in Claim 30. Therefore, the Block, et al and Yingst, et al references are not believed to in any way anticipate or render obvious the present invention as recited in Claim 30.

The Parmer, et al, Sakamoto, Kaufman, and Wakabayashi, et al references were cited for the limited teaching of disclosing a “housing 1 with board edge connector in view of Parmer at 54, 62, 64, (Fig. 2) and to use a receptacle with appropriate mating contacts as in Parmer at 24, 26 and to include a ground tab in view of Sakamoto at 15 and Kaufman at 83,” and a “mating

board edge with receptacle in Harding further suggested by Wakabayashi, fig. 10 at 551, CN11.”

None of these references disclose a pluggable transceiver. Furthermore, the Parmer, et al, Sakamoto, Kaufman, and Wakabayashi, et al references do not disclose transmitting and receiving optical subassemblies, staggered contacts, and optical receptacles. Thus, the Parmer, et al, Sakamoto, Kaufman, and Wakabayashi, et al references lack the claimed features of “a transmitting optical subassembly electrically associated with the circuit board,” and “a receiving optical subassembly electrically associated with the circuit board,” and “an electrical connector electrically associated with the circuit board, the electrical connector having a plurality of electrical contacts, a first electrical contact of the plurality of electrical contacts being a ground contact, and a second electrical contact of the plurality of electrical contacts being a non-ground electrical contact, and wherein the ground contact is offset from the non-ground electrical contact,” and “a first optical receptacle mechanically associated with the housing, the first optical receptacle adapted so as to receive a first fiber optic connector plug, the first optical receptacle being aligned with the transmitting optical subassembly,” and “a second optical receptacle mechanically associated with the housing, the second optical receptacle adapted so as to receive a second fiber optic connector plug, the second optical receptacle being aligned with the receiving optical subassembly, and wherein the second optical receptacle is positioned adjacent and parallel to the first optical receptacle,” and “a receptacle housing having a receptacle housing electrical connector, and a ground tab, the receptacle housing mounted to a mother board of a host device,” and “wherein, upon insertion of the housing into the receptacle housing, the grounding portion of the housing makes an electrical connection with the ground tab of the receptacle housing,” and “upon further insertion of the housing into the receptacle housing, the

ground contact of the electrical connector makes an electrical connection with a complimentary ground contact of the receptacle housing electrical connector,” and “upon still further insertion of the housing into the receptacle housing, the non-ground contact of the electrical connector makes an electrical connection with a complimentary non-ground contact of the receptacle housing electrical connector,” as recited in Claim 30. Therefore, the Parmer, et al, Sakamoto, Kaufman, and Wakabayashi, et al references are not believed to in any way anticipate or render obvious the present invention as recited in Claim 30.

The Matsushita reference was cited for the limited teaching of disclosing “the housing 1 circuit board with advanced grounds in view of Matsushita at 5, fig. 1 for additional static removal.” The Matsushita reference does not disclose a pluggable optoelectronic transceiver. Thus, the Matsushita reference lacks the claimed features of “a transmitting optical subassembly electrically associated with the circuit board,” and “a receiving optical subassembly electrically associated with the circuit board,” and “a first optical receptacle mechanically associated with the housing, the first optical receptacle adapted so as to receive a first fiber optic connector plug, the first optical receptacle being aligned with the transmitting optical subassembly,” and “a second optical receptacle mechanically associated with the housing, the second optical receptacle adapted so as to receive a second fiber optic connector plug, the second optical receptacle being aligned with the receiving optical subassembly, and wherein the second optical receptacle is positioned adjacent and parallel to the first optical receptacle,” and “a receptacle housing having a receptacle housing electrical connector, and a ground tab, the receptacle housing mounted to a mother board of a host device,” and “wherein, upon insertion of the housing into the receptacle housing, the grounding portion of the housing makes an electrical connection with the ground tab

of the receptacle housing,” as recited in Claim 30. Therefore, the Matsushita reference is not believed to in any way anticipate or render obvious the present invention as recited in Claim 30.

The Matsushita reference was cited in combination with the Parmer, et al, Sakamoto, Kaufman, and Wakabayashi, et al references, which were in turn cited in combination with the Block, et al and Yingst, et al references which were further in turn cited in combination with Harding in view of IBM and Kaufman for rendering obvious the claimed invention. The only reason discussed in the Office Action for combining the references was because “[i]t would have been obvious.” The Office Action does not set forth or cite the source for the motivation to combine references as set forth in MPEP sections 2142, and 2143. Therefore, Applicants believe that the rejection of Claim 30 should be removed, and that Claim 30 should be allowed.

Claims 31 and 32 were rejected in light of the references mentioned above and further in view of Lebby, et al.

Lebby, et al was cited for the limited teaching of disclosing “such type diodes.” The Lebby, et al reference does not disclose a pluggable optoelectronic transceiver that has a release lever or a grounding portion, nor does it disclose a receptacle housing for receiving the transceiver where the receptacle housing has a ground tab. Thus, the Lebby, et al reference lacks the claimed features of “a housing substantially having a shape of an oblong box, the housing having a grounding portion,” and “an electrical connector electrically associated with the circuit board, the electrical connector having a plurality of electrical contacts, a first electrical contact of the plurality of electrical contacts being a ground contact, and a second electrical contact of the plurality of electrical contacts being a non-ground electrical contact, and wherein the ground contact is offset from the non-ground electrical contact,” and “a first optical receptacle

mechanically associated with the housing, the first optical receptacle adapted so as to receive a first fiber optic connector plug, the first optical receptacle being aligned with the transmitting optical subassembly,” and “a second optical receptacle mechanically associated with the housing, the second optical receptacle adapted so as to receive a second fiber optic connector plug, the second optical receptacle being aligned with the receiving optical subassembly, and wherein the second optical receptacle is positioned adjacent and parallel to the first optical receptacle,” and “at least one of a release member and a latch member mounted to the housing,” and “a receptacle housing having a receptacle housing electrical connector, and a ground tab, the receptacle housing mounted to a mother board of a host device,” and “wherein, upon insertion of the housing into the receptacle housing, the grounding portion of the housing makes an electrical connection with the ground tab of the receptacle housing,” as recited in Claim 30. Therefore, the Lebby, et al reference is not believed to in any way anticipate or render obvious the present invention as recited in Claim 30.

Lebby, et al was cited in combination with the references discussed above in regard to Claim 30 to render obvious the claimed invention. Applicants believe that the Lebby, et al reference provides no motivation to combine the references so as to overcome the shortcomings of the references discussed above in regard to Claim 30. Claims 31 and 32 depend from Claim 30. Thus, Claims 31 and 32 are believed to be clearly allowable over these references.

Claim 33 was rejected in light of the references mentioned above in regard to Claims 30, 31, and 32 and further in view of IBM.

The IBM reference was cited for the limited teaching of disclosing a metallized coating on a surface of the housing. The shortcomings of the IBM reference have been previously

mentioned above. Therefore, the IBM reference is not believed to in any way anticipate or render obvious the present invention as recited in Claim 30.

The IBM reference was cited in combination with the references discussed above in regard to Claims 30, 31, and 32 to render obvious the claimed invention. Applicants believe that the IBM reference provides no motivation to combine the references so as to overcome the shortcomings of the references discussed above in regard to Claims 30, 31, and 32. Claim 33 depends from Claim 30. Thus, Claim 33 is believed to be clearly allowable over these references.

A grammatical and clarifying amendment was made to Claim 30.

The specification was amended so as to include the phrase "now abandoned" after the first serial number in the parent case paragraph.

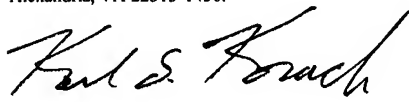
Applicants submit herewith a Petition for Extension of Time under 37 C.F.R. §1.136(a) for a period of two (2) months and authorization of payment of the fee of \$450 pursuant to 37 C.F.R. §1.17(a)(2) from our Deposit Account No. 50-1413. Thus, Applicants seek to extend the termination of the response period from January 14, 2005, to March 14, 2005.

In view of the foregoing comments, it is respectfully submitted that the claims are definite and in condition for allowance. An early and favorable action to that effect is therefore respectfully requested.

Respectfully submitted,

I hereby certify that this paper and/or fee is being deposited
with the United States Postal Service First-Class mail on this 4th
day of March, 2005 and is addressed to:

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